

WHAT IS CLAIMED IS:

1 1. A watercraft capable of accommodating passengers for travel both on the surface  
2 and below the surface of water comprising a modular design including a hull  
3 compartment and a passenger housing compartment.

1  
1 2. The watercraft according to claim 1 wherein said hull comprises a hull  
2 compartment containing at least one air bladder which, when inflated, displaces water  
3 from within the hull, and which, when deflated, permits water to enter the hull  
4 compartment.

1  
1 3. The watercraft according to claim 2 wherein said at least one air bladder within  
2 said hull is connected to a source of compressed gas such that said at least one air bladder  
3 may be inflated or deflated at will to induce the watercraft to surface when said at least  
4 one air bladder is inflated and to submerge when said at east one air bladder is deflated.

1  
1 4. The watercraft according to claim 3 wherein said compressed gas resides within  
2 said hull in a plurality of compressed gas tanks.

1  
1 5. The watercraft according to claim 2 comprising four air bladders.

1  
1 6. The watercraft according to claim 5 wherein said watercraft is induced to  
2 submerge by deflating said air bladders and to ascend for surface travel by inflating said  
3 air bladders.

1  
1 7. The watercraft according to claim 1 wherein said hull compartment is a sealed  
2 compartment which may be filled with air or water at will.

1  
1 8. The watercraft according to claim 1 further comprising an engine compartment.

1 9. The watercraft according to claim 8 wherein said engine compartment permits  
2 water to enter up to a first height when said watercraft resides on the surface of a body of  
3 water, and which permits water to enter up to a second height when said watercraft is  
4 submerged, such that an equalization of internal and external pressure is achieved.

1 10. The watercraft according to claim 9 wherein said first height and said second  
2 height of water is controlled by a valve which shuts off at a predetermined water height  
3 within said engine compartment.

1 11. The watercraft according to claim 10 wherein said valve comprises a float.

1 12. The watercraft according to claim 11 wherein said float shuts off when water  
2 entering said engine compartment reaches a predetermined height, and wherein said  
3 engine compartment is pressurized by a source of compressed gas as needed to maintain  
4 parity between pressure within said engine compartment and water pressure external to  
5 said engine compartment.

1 13. The watercraft according to claim 1 wherein said passenger compartment  
2 comprises a substantially tubular compartment.

1 14. The watercraft according to claim 13 wherein said substantially tubular passenger  
2 compartment may be opened and closed at will, but which, when closed, forms an air-  
3 and water-tight compartment.

1 15. The watercraft according to claim 14 wherein said substantially tubular passenger  
2 compartment when closed is maintained at a constant one atmosphere (14.7 psi) of  
3 pressure by means of a source of compressed gas and the structural support provided for  
4 the passenger compartment.

1 16. The watercraft according to claim 15 wherein said source of compressed gas  
2 provides a stream of gas which not only maintains said compartment at a constant one

3 atmosphere of pressure, but which also replenishes the gas in said compartment so as to  
4 contain an optimal mixture of oxygen, nitrogen and other gasses, as needed, to ensure the  
5 safety and health of any living beings contained within said passenger compartment.

1  
1 17. The watercraft according to claim 16 wherein said compartment comprises a non-  
2 deformable translucent material to form at least a portion of the walls of said  
3 compartment when said compartment is closed.

1  
1 18. The watercraft according to claim 17 wherein said translucent material is a  
2 translucent acrylic material.

1  
1 19. The watercraft according to claim 18 wherein said translucent acrylic material is  
2 Plexyglass or Lucite.

1  
1 20. The watercraft according to claim 18 wherein said translucent acrylic material is  
2 capable of sustaining external pressure, when supported by an internal gas pressure of  
3 one atmosphere, equal to the maximum pressure anticipated to be encountered by said  
4 watercraft well beyond the pressure expected at the maximum submersion depth for said  
5 watercraft.

1  
1 21. The watercraft according to claim 20 wherein said translucent acrylic material is  
2 at least one inch thick.

1  
1 22. The watercraft according to claim 21 wherein said translucent acrylic material is  
2 in the form of curved segments which form sealed portions of the walls of said  
3 substantially tubular passenger compartment.

1  
1 23. The watercraft according to claim 1 further comprising at least one diesel or gas  
2 motor for above-water propulsion of said watercraft.

1 24. The watercraft according to claim 23 further comprising at least one electric  
2 motor for submerged propulsion of said watercraft.

1 25. The watercraft according to claim 1 comprising a total mass of approximately  
2 15,000 pounds.

1 26. The watercraft according to claim 22 comprising a ballast of water, and  
2 comprising an added emergency release ballast weighing approximately 3,000 pounds.

1 27. The watercraft according to claim 26 wherein said ballast is automatically  
2 released from said watercraft if a depth below a preset limit, or a carbon dioxide content  
3 in the passenger compartment above a pre-determined tolerance is reached, thereby  
4 causing said watercraft to immediately ascend to the water surface.

1 28. A submersible watercraft amenable to surface transport as a conventional above-  
2 water surface watercraft, comprising a sealable, pressurizable passenger compartment, a  
3 hull, and an engine compartment, wherein the hull is not a pressure hull, but contains air-  
4 bladders by means of which water is expelled from the hull and by means of which  
5 watercraft buoyancy is controlled.

1 29. A method of making a combination surface and submersible watercraft which  
2 comprises manufacturing separate hull, passenger compartment, and engine  
3 compartments, and affixing said compartments to each other.

1 30. The method according to claim 29, wherein said hull further comprises air  
2 bladders which may be inflated by an operator of said watercraft when surface travel of  
3 the watercraft is desired, and deflated and filled with water ballast, when submerged  
4 travel of the watercraft is desired.